FIG. 1

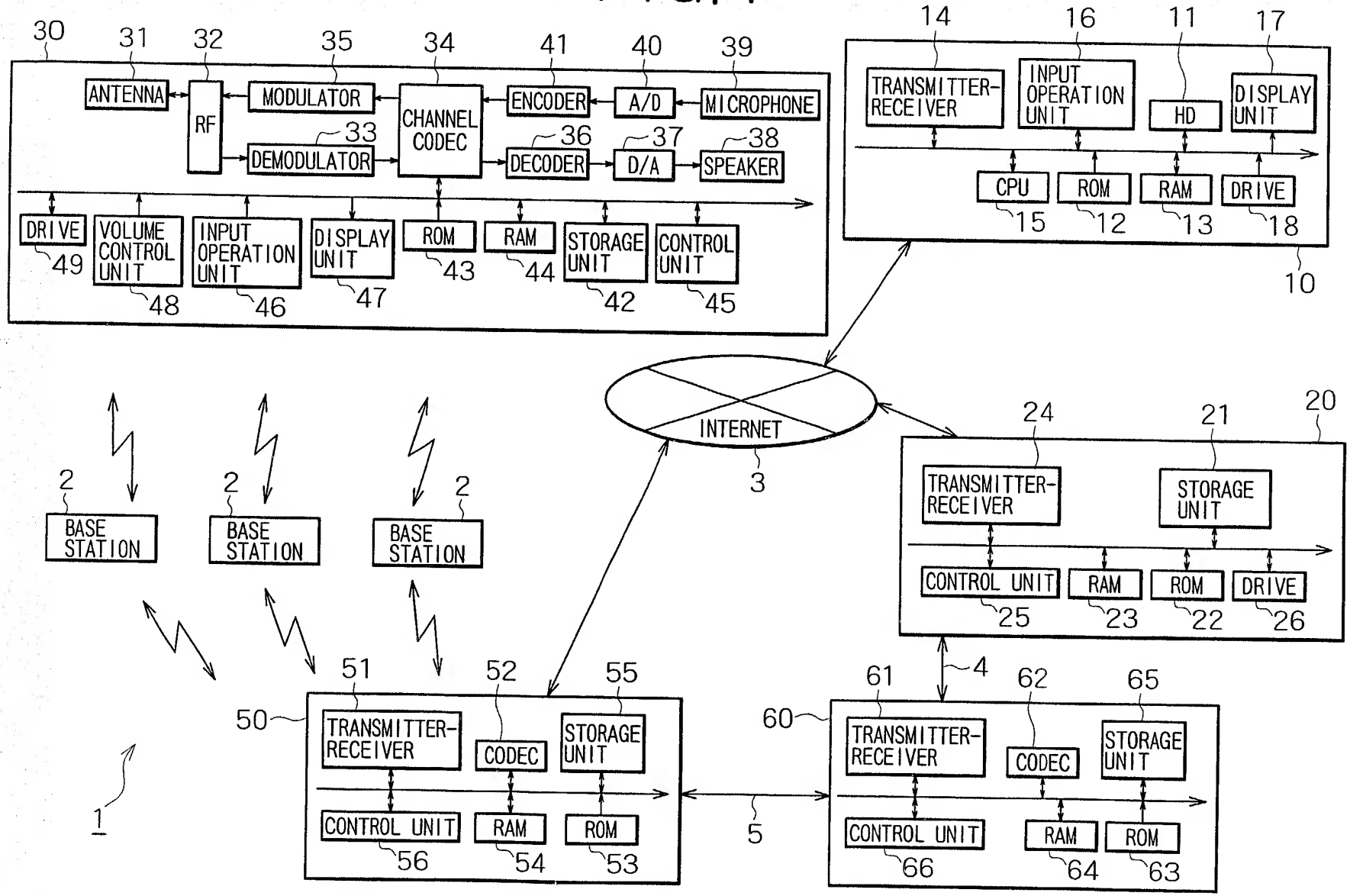

30
31
32
35
34
41
40
39
ANTENNA
RF
MODULATOR
DEMODULATOR
33
CHANNEL CODEC
ENCODER
DECODER
36
A/D
D/A
37
MICROPHONE
SPEAKER
38
DRIVE
49
VOLUME CONTROL UNIT
48
INPUT OPERATION UNIT
46
DISPLAY UNIT
47
ROM
43
RAM
44
STORAGE UNIT
42
CONTROL UNIT
45
14
16
11
17
TRANSMITTER-RECEIVER
INPUT OPERATION UNIT
HD
DISPLAY UNIT
CPU
15
ROM
12
RAM
13
DRIVE
18
10
INTERNET
3
2
BASE STATION
2
BASE STATION
2
BASE STATION
24
21
20
TRANSMITTER-RECEIVER
STORAGE UNIT
CONTROL UNIT
25
RAM
23
ROM
22
DRIVE
26
4
51
52
55
50
TRANSMITTER-RECEIVER
CODEC
STORAGE UNIT
CONTROL UNIT
56
RAM
54
ROM
53
1
5
61
62
65
60
TRANSMITTER-RECEIVER
CODEC
STORAGE UNIT
CONTROL UNIT
66
RAM
64
ROM
63

FIG. 2

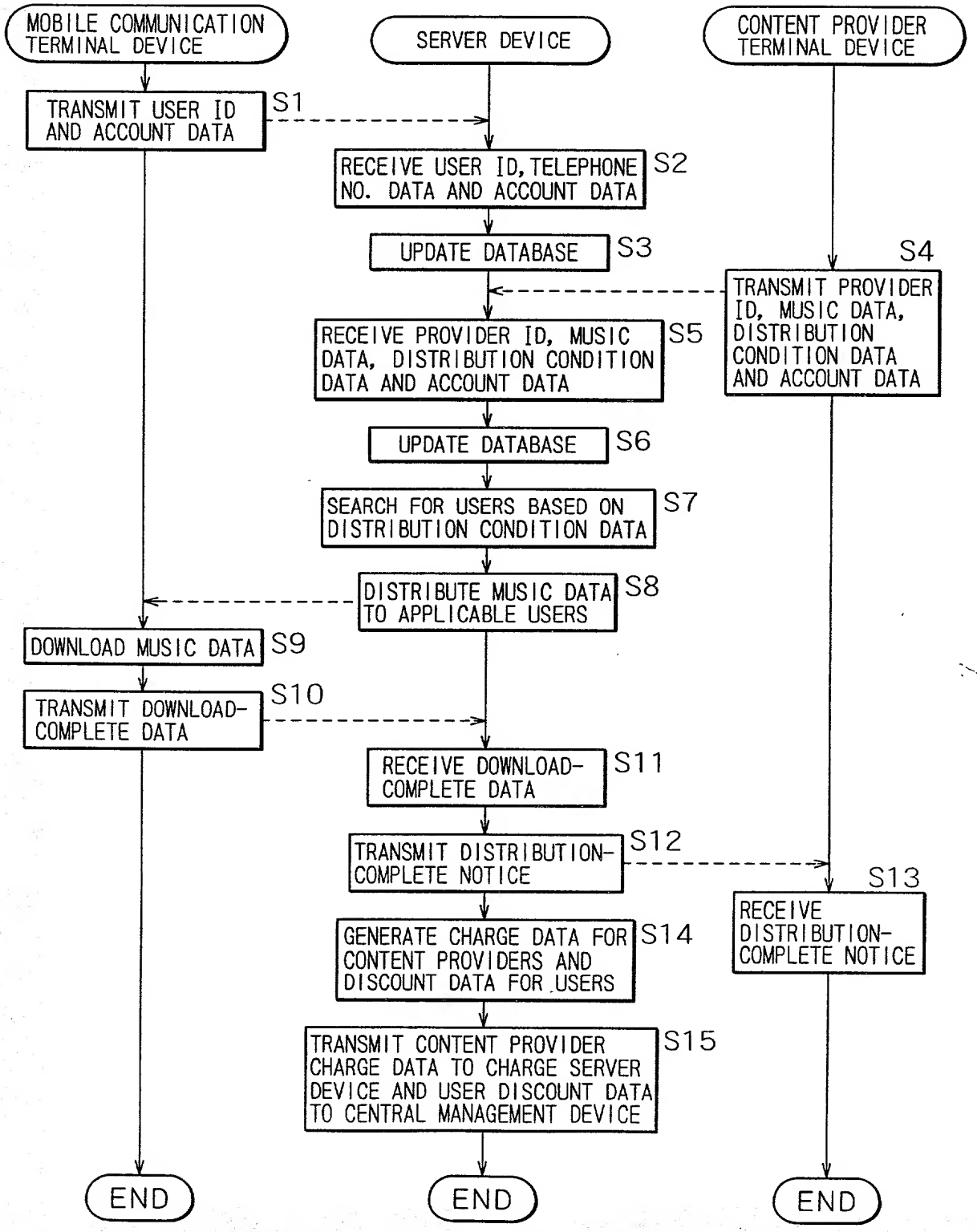

MOBILE COMMUNICATION TERMINAL DEVICE
SERVER DEVICE
CONTENT PROVIDER TERMINAL DEVICE
TRANSMIT USER ID AND ACCOUNT DATA
S1
RECEIVE USER ID, TELEPHONE NO. DATA AND ACCOUNT DATA
S2
UPDATE DATABASE
S3
S4
TRANSMIT PROVIDER ID, MUSIC DATA, DISTRIBUTION CONDITION DATA AND ACCOUNT DATA
RECEIVE PROVIDER ID, MUSIC DATA, DISTRIBUTION CONDITION DATA AND ACCOUNT DATA
S5
UPDATE DATABASE
S6
SEARCH FOR USERS BASED ON DISTRIBUTION CONDITION DATA
S7
DISTRIBUTE MUSIC DATA TO APPLICABLE USERS
S8
DOWNLOAD MUSIC DATA
S9
TRANSMIT DOWNLOAD-COMPLETE DATA
S10
RECEIVE DOWNLOAD-COMPLETE DATA
S11
TRANSMIT DISTRIBUTION-COMPLETE NOTICE
S12
S13
RECEIVE DISTRIBUTION-COMPLETE NOTICE
GENERATE CHARGE DATA FOR CONTENT PROVIDERS AND DISCOUNT DATA FOR USERS
S14
TRANSMIT CONTENT PROVIDER CHARGE DATA TO CHARGE SERVER DEVICE AND USER DISCOUNT DATA TO CENTRAL MANAGEMENT DEVICE
S15
END
END
END

FIG. 3

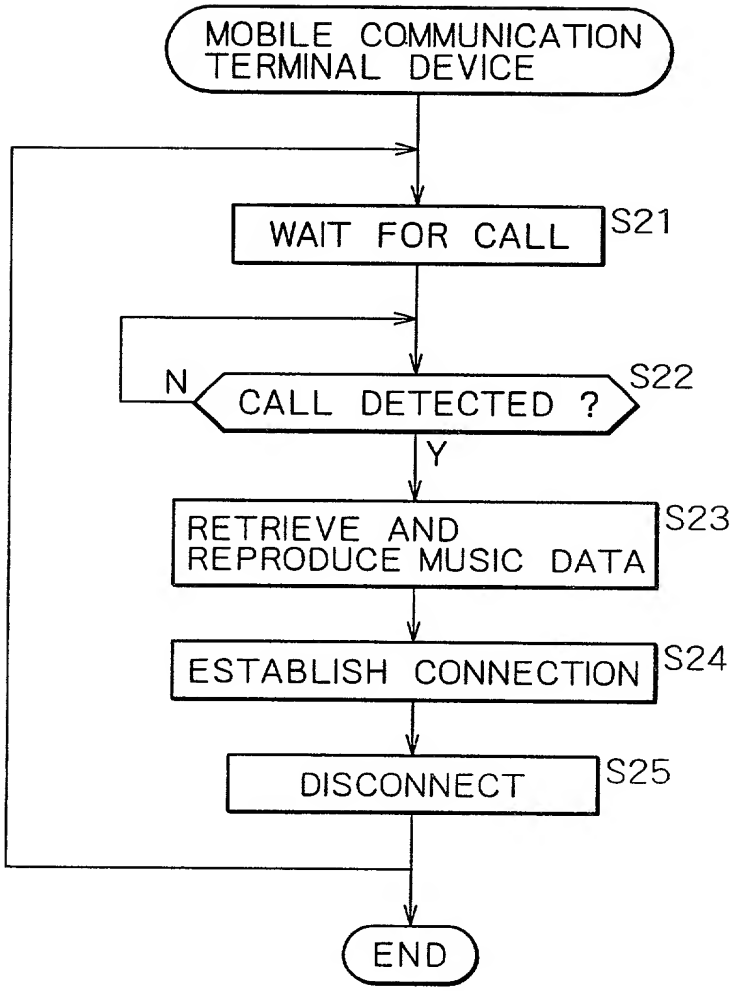

MOBILE COMMUNICATION TERMINAL DEVICE
WAIT FOR CALL
S21
N
CALL DETECTED ?
S22
Y
RETRIEVE AND REPRODUCE MUSIC DATA
S23
ESTABLISH CONNECTION
S24
DISCONNECT
S25
END

FIG. 4

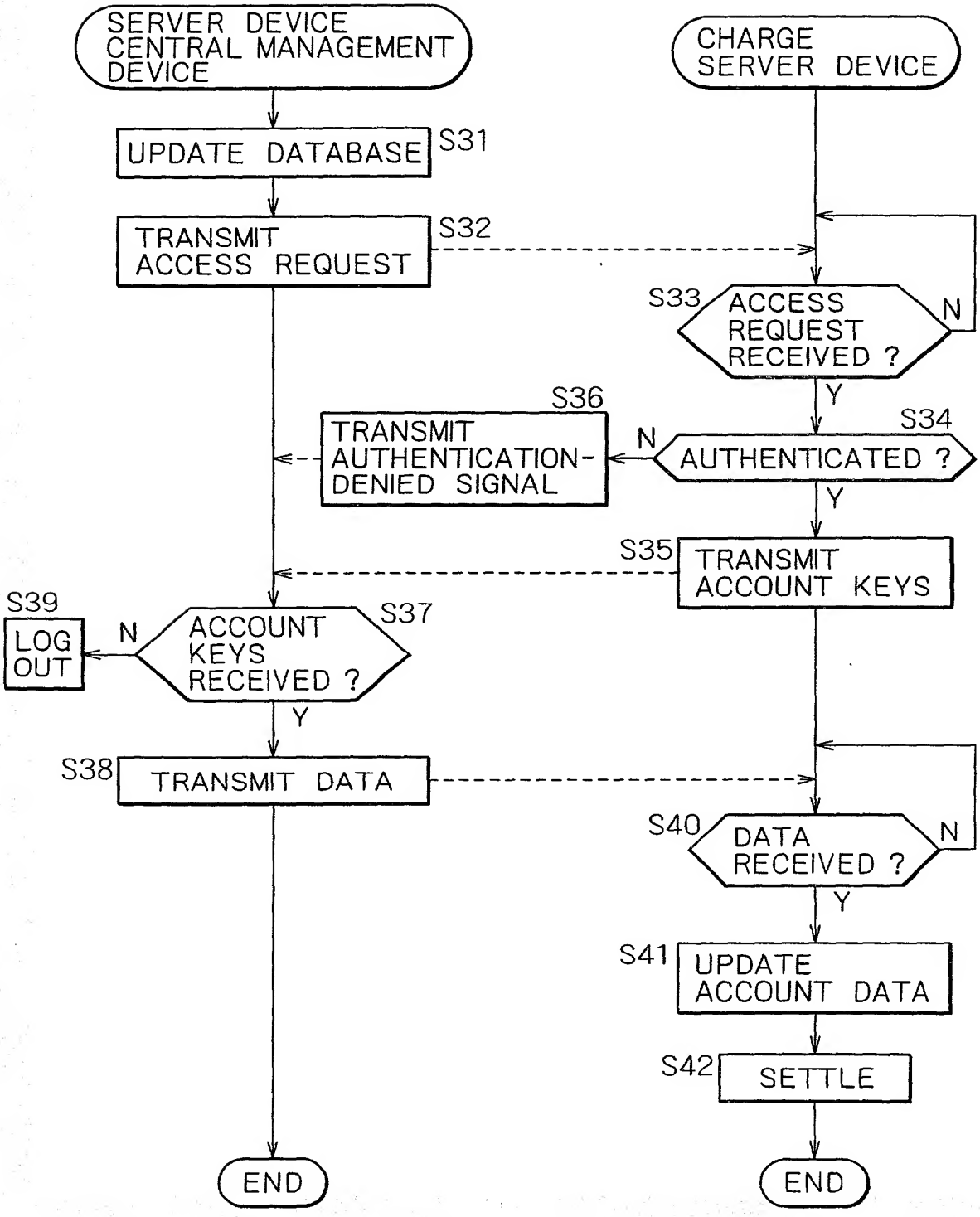

SERVER DEVICE
CENTRAL MANAGEMENT DEVICE
CHARGE SERVER DEVICE
UPDATE DATABASE
S31
TRANSMIT ACCESS REQUEST
S32
S33
ACCESS REQUEST RECEIVED ?
N
Y
S34
AUTHENTICATED ?
N
S36
TRANSMIT AUTHENTICATION-DENIED SIGNAL
Y
S35
TRANSMIT ACCOUNT KEYS
S39
LOG OUT
N
S37
ACCOUNT KEYS RECEIVED ?
Y
S38
TRANSMIT DATA
S40
DATA RECEIVED ?
N
Y
S41
UPDATE ACCOUNT DATA
S42
SETTLE
END
END

FIG. 5

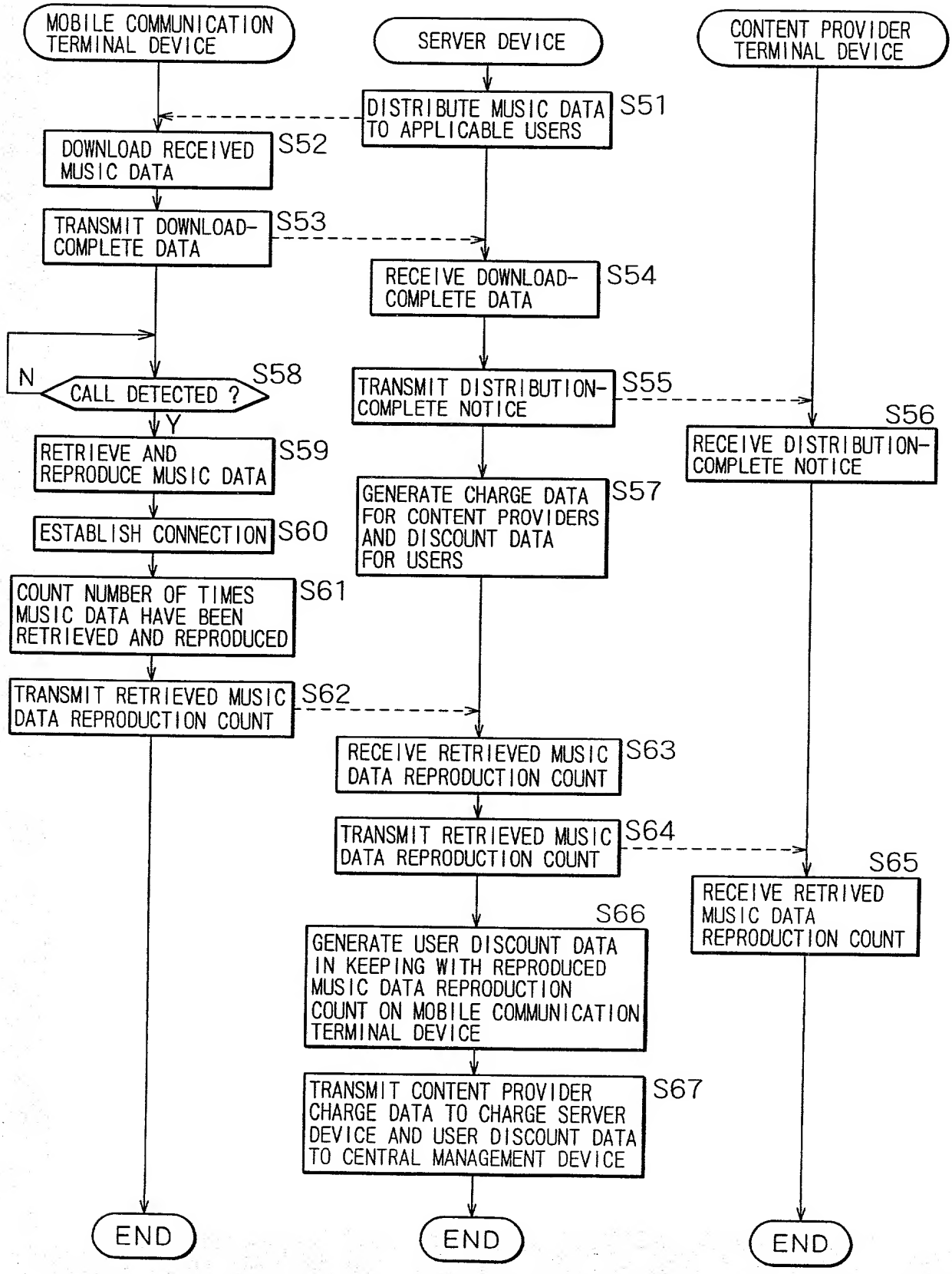

MOBILE COMMUNICATION TERMINAL DEVICE
SERVER DEVICE
CONTENT PROVIDER TERMINAL DEVICE
DISTRIBUTE MUSIC DATA TO APPLICABLE USERS
S51
DOWNLOAD RECEIVED MUSIC DATA
S52
TRANSMIT DOWNLOAD-COMPLETE DATA
S53
RECEIVE DOWNLOAD-COMPLETE DATA
S54
N
CALL DETECTED ?
S58
Y
TRANSMIT DISTRIBUTION-COMPLETE NOTICE
S55
S56
RECEIVE DISTRIBUTION-COMPLETE NOTICE
RETRIEVE AND REPRODUCE MUSIC DATA
S59
GENERATE CHARGE DATA FOR CONTENT PROVIDERS AND DISCOUNT DATA FOR USERS
S57
ESTABLISH CONNECTION
S60
COUNT NUMBER OF TIMES MUSIC DATA HAVE BEEN RETRIEVED AND REPRODUCED
S61
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT
S62
RECEIVE RETRIEVED MUSIC DATA REPRODUCTION COUNT
S63
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT
S64
S65
RECEIVE RETRIVED MUSIC DATA REPRODUCTION COUNT
S66
GENERATE USER DISCOUNT DATA IN KEEPING WITH REPRODUCED MUSIC DATA REPRODUCTION COUNT ON MOBILE COMMUNICATION TERMINAL DEVICE
TRANSMIT CONTENT PROVIDER CHARGE DATA TO CHARGE SERVER DEVICE AND USER DISCOUNT DATA TO CENTRAL MANAGEMENT DEVICE
S67
END
END
END

FIG. 6

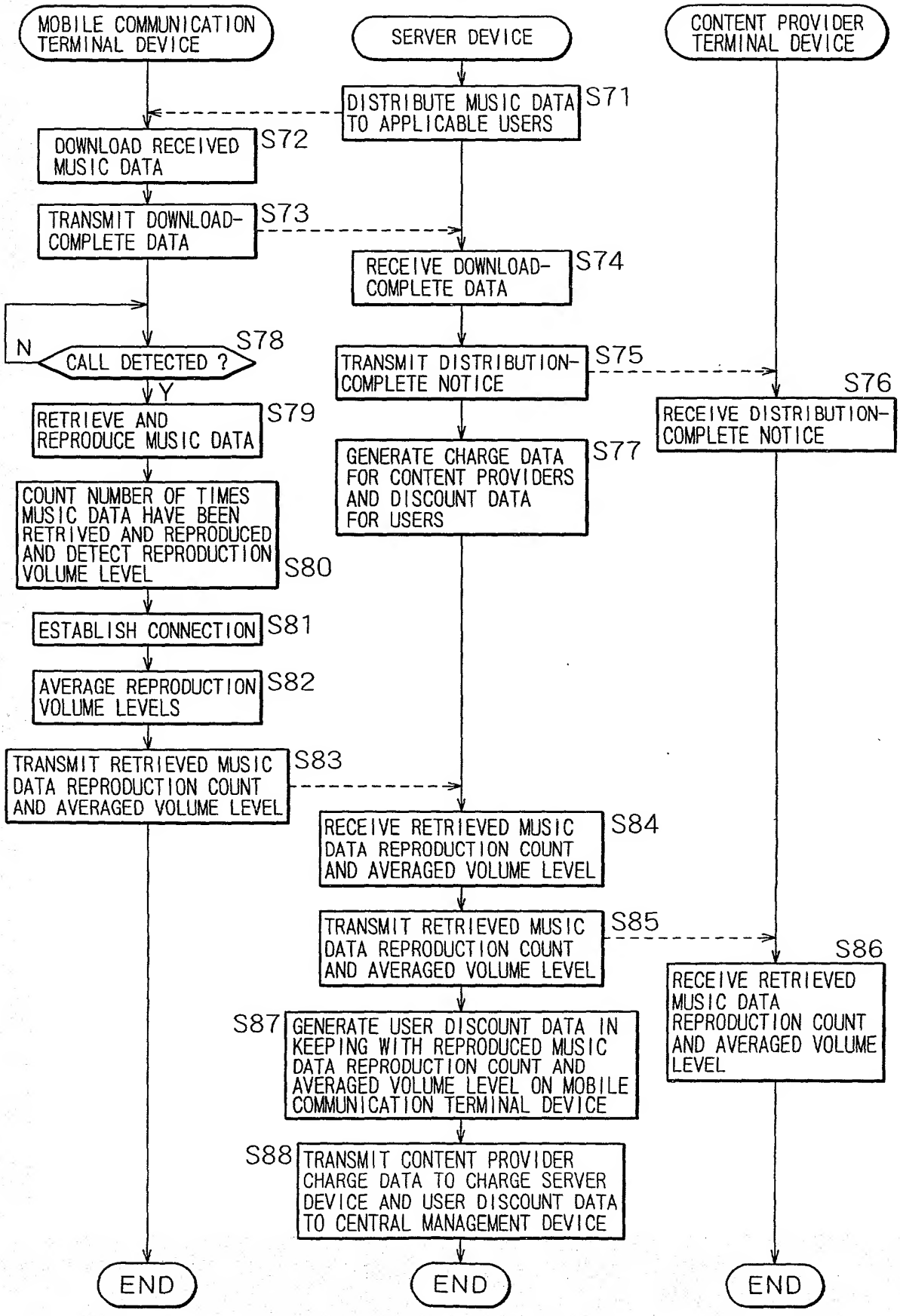

MOBILE COMMUNICATION TERMINAL DEVICE
SERVER DEVICE
CONTENT PROVIDER TERMINAL DEVICE
DISTRIBUTE MUSIC DATA TO APPLICABLE USERS
S71
DOWNLOAD RECEIVED MUSIC DATA
S72
TRANSMIT DOWNLOAD-COMPLETE DATA
S73
RECEIVE DOWNLOAD-COMPLETE DATA
S74
N
CALL DETECTED ?
S78
Y
TRANSMIT DISTRIBUTION-COMPLETE NOTICE
S75
S76
RECEIVE DISTRIBUTION-COMPLETE NOTICE
RETRIEVE AND REPRODUCE MUSIC DATA
S79
GENERATE CHARGE DATA FOR CONTENT PROVIDERS AND DISCOUNT DATA FOR USERS
S77
COUNT NUMBER OF TIMES MUSIC DATA HAVE BEEN RETRIVED AND REPRODUCED AND DETECT REPRODUCTION VOLUME LEVEL
S80
ESTABLISH CONNECTION
S81
AVERAGE REPRODUCTION VOLUME LEVELS
S82
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT AND AVERAGED VOLUME LEVEL
S83
RECEIVE RETRIEVED MUSIC DATA REPRODUCTION COUNT AND AVERAGED VOLUME LEVEL
S84
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT AND AVERAGED VOLUME LEVEL
S85
S86
RECEIVE RETRIEVED MUSIC DATA REPRODUCTION COUNT AND AVERAGED VOLUME LEVEL
S87
GENERATE USER DISCOUNT DATA IN KEEPING WITH REPRODUCED MUSIC DATA REPRODUCTION COUNT AND AVERAGED VOLUME LEVEL ON MOBILE COMMUNICATION TERMINAL DEVICE
S88
TRANSMIT CONTENT PROVIDER CHARGE DATA TO CHARGE SERVER DEVICE AND USER DISCOUNT DATA TO CENTRAL MANAGEMENT DEVICE
END
END
END

FIG. 7

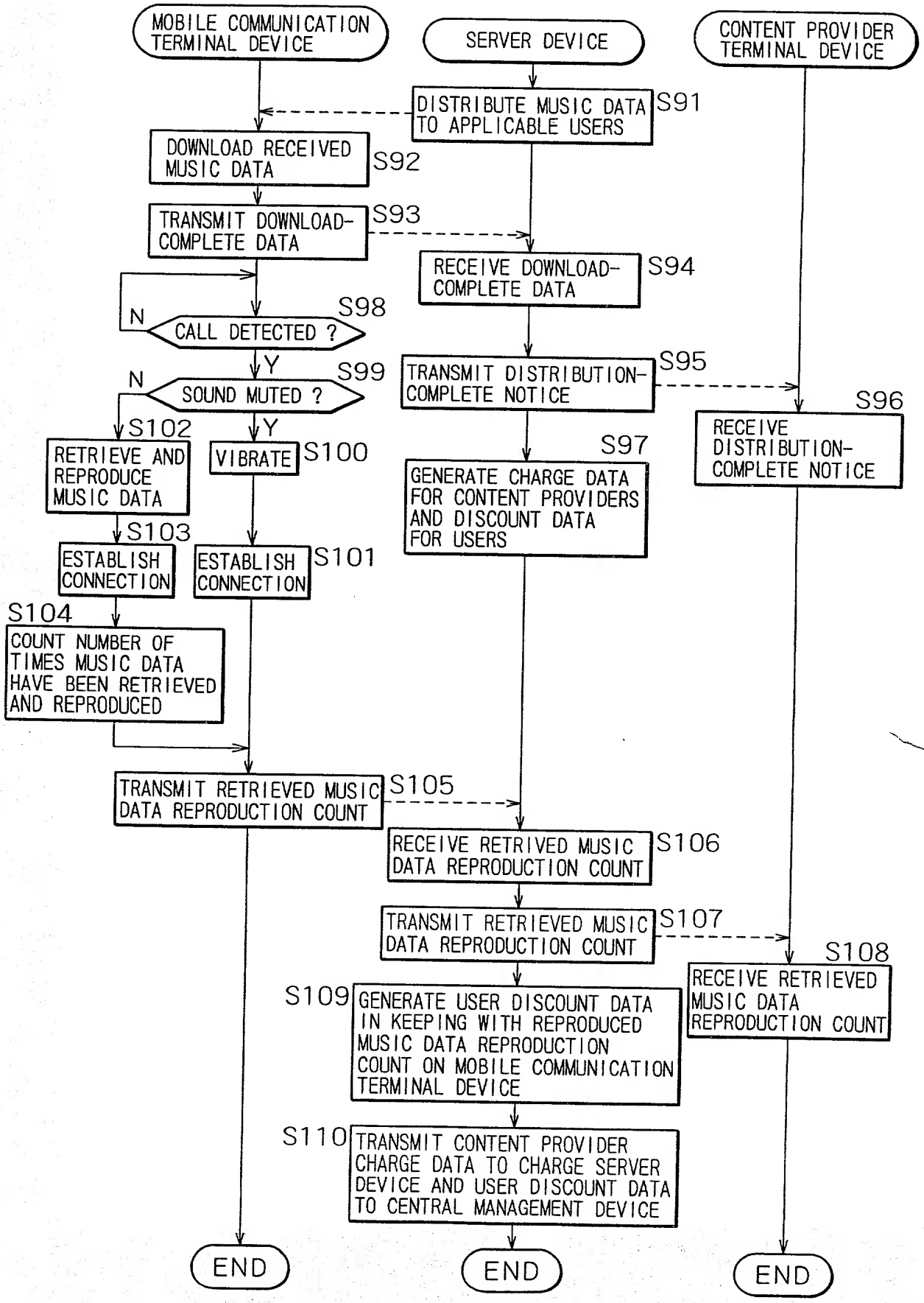

MOBILE COMMUNICATION TERMINAL DEVICE
SERVER DEVICE
CONTENT PROVIDER TERMINAL DEVICE
DISTRIBUTE MUSIC DATA TO APPLICABLE USERS
S91
DOWNLOAD RECEIVED MUSIC DATA
S92
TRANSMIT DOWNLOAD-COMPLETE DATA
S93
RECEIVE DOWNLOAD-COMPLETE DATA
S94
N
CALL DETECTED ?
S98
Y
N
SOUND MUTED ?
S99
Y
TRANSMIT DISTRIBUTION-COMPLETE NOTICE
S95
S96
RECEIVE DISTRIBUTION-COMPLETE NOTICE
S102
RETRIEVE AND REPRODUCE MUSIC DATA
VIBRATE
S100
S97
GENERATE CHARGE DATA FOR CONTENT PROVIDERS AND DISCOUNT DATA FOR USERS
S103
ESTABLISH CONNECTION
ESTABLISH CONNECTION
S101
S104
COUNT NUMBER OF TIMES MUSIC DATA HAVE BEEN RETRIEVED AND REPRODUCED
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT
S105
RECEIVE RETRIVED MUSIC DATA REPRODUCTION COUNT
S106
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT
S107
S108
RECEIVE RETRIEVED MUSIC DATA REPRODUCTION COUNT
S109
GENERATE USER DISCOUNT DATA IN KEEPING WITH REPRODUCED MUSIC DATA REPRODUCTION COUNT ON MOBILE COMMUNICATION TERMINAL DEVICE
S110
TRANSMIT CONTENT PROVIDER CHARGE DATA TO CHARGE SERVER DEVICE AND USER DISCOUNT DATA TO CENTRAL MANAGEMENT DEVICE
END
END
END

FIG. 8

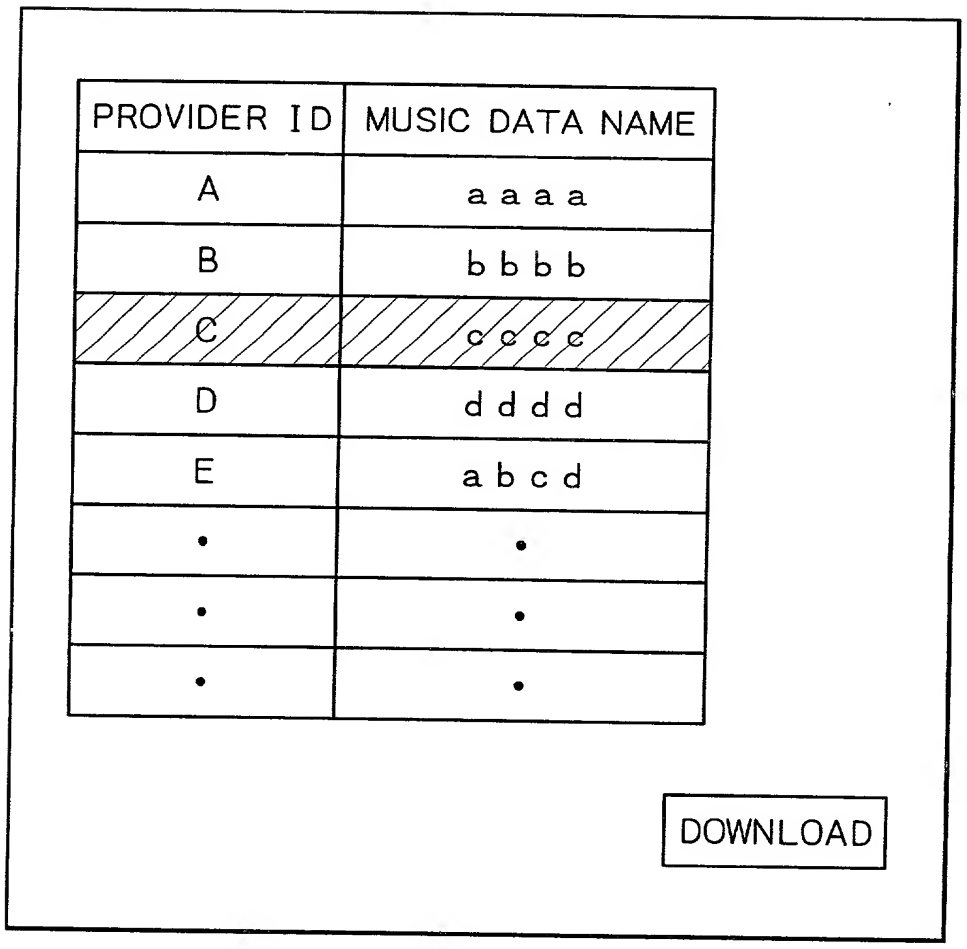
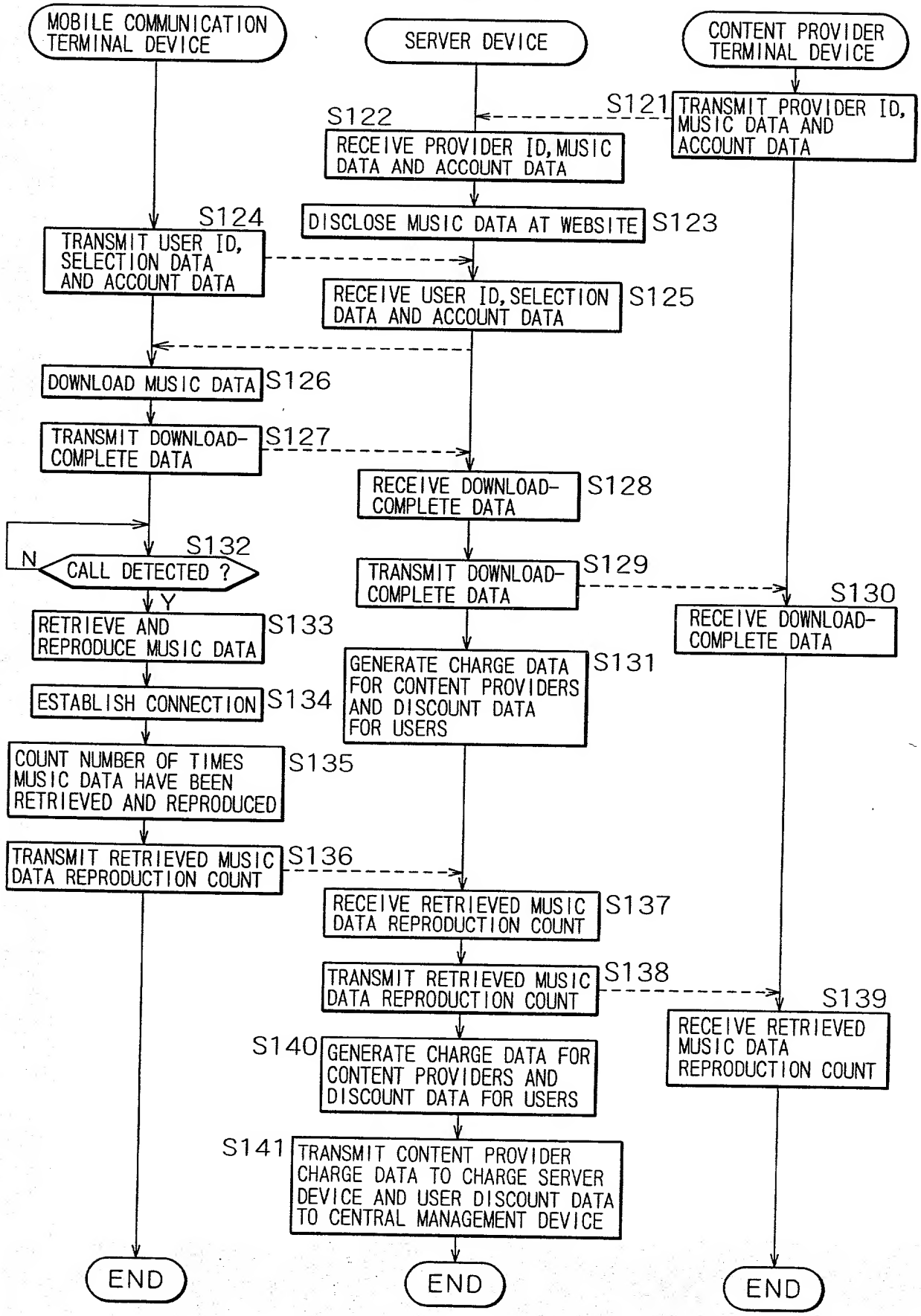

PROVIDER ID
MUSIC DATA NAME
A
a a a a
B
b b b b
C
c c c c
D
d d d d
E
a b c d
DOWNLOAD

FIG. 9


MOBILE COMMUNICATION TERMINAL DEVICE
SERVER DEVICE
CONTENT PROVIDER TERMINAL DEVICE
S121
TRANSMIT PROVIDER ID, MUSIC DATA AND ACCOUNT DATA
S122
RECEIVE PROVIDER ID, MUSIC DATA AND ACCOUNT DATA
DISCLOSE MUSIC DATA AT WEBSITE
S123
S124
TRANSMIT USER ID, SELECTION DATA AND ACCOUNT DATA
RECEIVE USER ID, SELECTION DATA AND ACCOUNT DATA
S125
DOWNLOAD MUSIC DATA
S126
TRANSMIT DOWNLOAD-COMPLETE DATA
S127
RECEIVE DOWNLOAD-COMPLETE DATA
S128
N
S132
CALL DETECTED ?
Y
TRANSMIT DOWNLOAD-COMPLETE DATA
S129
S130
RECEIVE DOWNLOAD-COMPLETE DATA
RETRIEVE AND REPRODUCE MUSIC DATA
S133
GENERATE CHARGE DATA FOR CONTENT PROVIDERS AND DISCOUNT DATA FOR USERS
S131
ESTABLISH CONNECTION
S134
COUNT NUMBER OF TIMES MUSIC DATA HAVE BEEN RETRIEVED AND REPRODUCED
S135
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT
S136
RECEIVE RETRIEVED MUSIC DATA REPRODUCTION COUNT
S137
TRANSMIT RETRIEVED MUSIC DATA REPRODUCTION COUNT
S138
S139
RECEIVE RETRIEVED MUSIC DATA REPRODUCTION COUNT
S140
GENERATE CHARGE DATA FOR CONTENT PROVIDERS AND DISCOUNT DATA FOR USERS
S141
TRANSMIT CONTENT PROVIDER CHARGE DATA TO CHARGE SERVER DEVICE AND USER DISCOUNT DATA TO CENTRAL MANAGEMENT DEVICE
END
END
END